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NATIONAL EUTROPHICATION SURVEY

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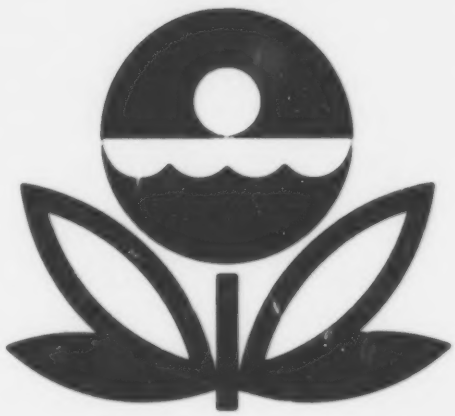

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REPORT

ON

MARTIN LAKE

ELMORE AND TALLAPOOSA COUNTIES

ALABAMA

EPA REGION IV

WORKING PAPER NO. 231

WITH THE COOPERATION OF THE

ALABAMA WATER IMPROVEMENT COMMISSION

AND THE

ALABAMA NATIONAL GUARD

JULY 1976

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16. ABSTRACT

Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

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CONTENTS

	Page
Foreword	ii
List of Study Lakes - Alabama	iv
Lake and Drainage Area Map	v
Sections	
I. Conclusions	1
II. Lake and Drainage Basin Characteristics	4
III. Lake Water Quality Summary	6
V. Nutrient Loadings	13
V. Literature Reviewed	20
VI. Appendices	21

FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point source discharge reduction and nonpoint source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's freshwater lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by the U.S. Environmental Protection Agency and to augment plans implementation by the states.

ACKNOWLEDGEMENTS

The staff of the National Eutrophication Survey (Office of Research and Development, U.S. Environmental Protection Agency) expresses sincere appreciation to the Alabama Water Improvement Commission for professional involvement and to the Alabama National Guard for conducting the tributary sampling phase of the Survey.

E. John Williford, Chief, Surveillance and Monitoring Section; and John C. Chitwood, Biologist, Surveillance and Monitoring Section; and Sam L. Coleman, Water Quality Planning Section; and M. H. Floyd, Engineer, Surveillance and Monitoring Section; and Truman Green, Engineer, Municipal Waste Control Section; and Tim McCartha, Biologist, Surveillance and Monitoring Section; and James E. McIndoe, Engineer, Water Quality Planning Section; and Richard T. Maddox, Engineer, Industrial Waste Control Section; and James T. White, Engineer, Municipal Waste Control Section provided invaluable lake documentation and counsel during the course of the Survey.

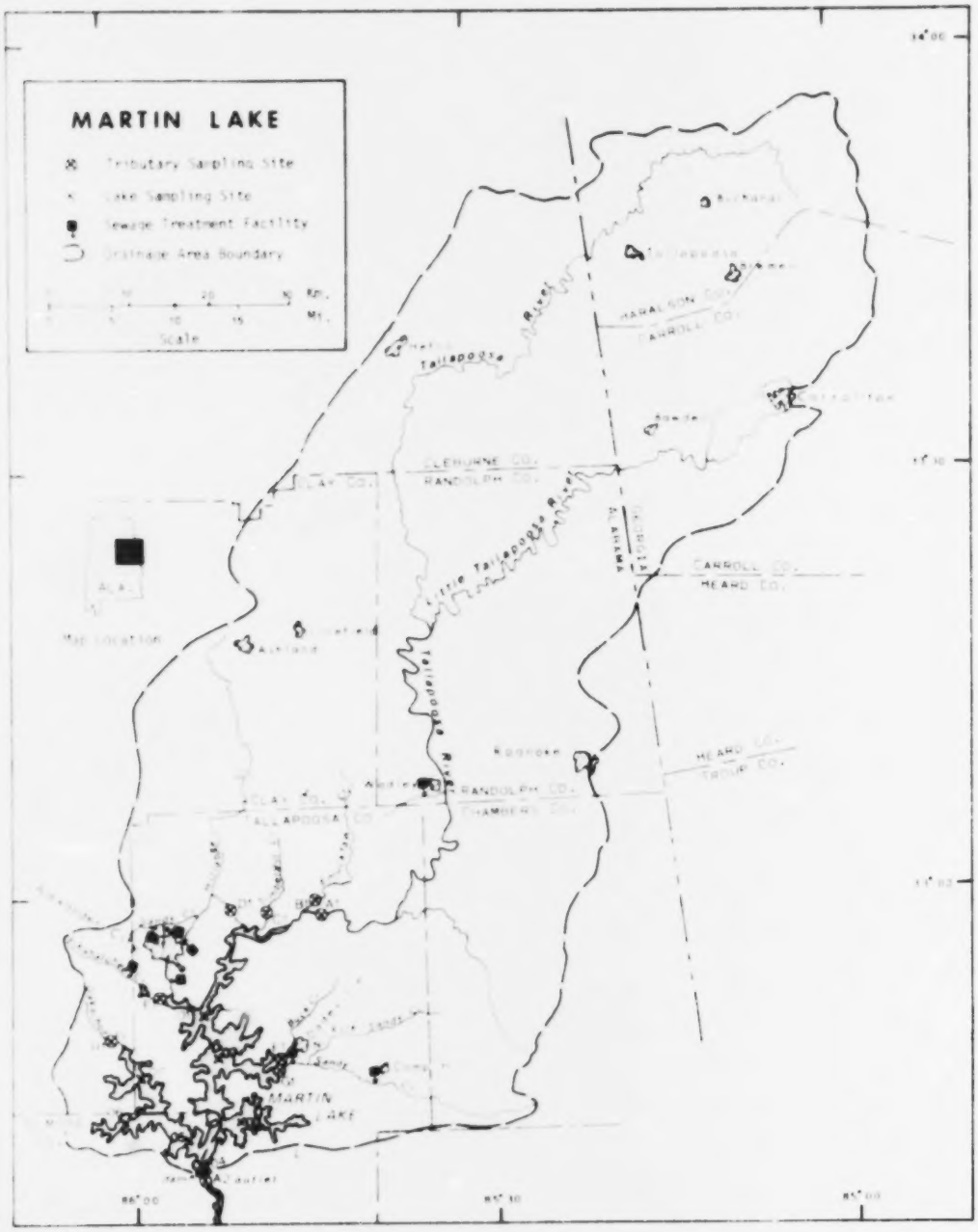
Major General Charles A. Rollo, Adjutant General of Alabama, and Project Officer Lt. Col. Wash B. Ray, who directed the volunteer efforts of the Alabama National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF ALABAMA

LAKE NAME	COUNTY
Bankhead	Walker
Gantt	Covington
Guntersville	Marshall, Johnson
Holt Lock and Dam	Tuscaloosa
Lay	Chilton, Coosa
Martin	Elmore, Tallapoosa
Mitchell	Coosa, Chilton
Pickwick	Colbert, Lauderdale (Tishomingo in MS and Hardin in TN)
Purdy	Jefferson, Shelby
Weiss	Cherokee
Wilson	Lauderdale, Colbert, Lawrence


MARTIN LAKE
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Drainage Area Boundary
Scale
Mi.
Km.
Tallapoosa River
Little Tallapoosa River
MARTIN LAKE
CLAY CO.
RANDOLPH CO.
CLEBURNE CO.
HARALSON CO.
CARROLL CO.
HEARD CO.
TROUP CO.
ALLAPOOSA CO.
CHAMBERS CO.
Alexander City
Roanoke
Wedowee
Buttahatchee River
Yellow Leaf Creek
Site Location
86°00
85°10
85°00

REPORT ON MARTIN LAKE, ALABAMA

STORET NO. 0107

I. CONCLUSIONS

A. Trophic Condition*:

On the basis of field observations and Survey data, Martin Lake is considered mesotrophic. Moderate numbers of pollution-tolerant genera were predominant among the phytoplankton identified. Of the 11 Alabama lakes sampled in 1973, 10 had higher median total phosphorus concentrations than Martin Lake, and 9 had higher median inorganic nitrogen. Chlorophyll a levels ranged from a low of 1.4 µg/l in the early spring to 27.3 µg/l in the summer. Secchi disc visibility and potential for primary production as measured by algal assay control yield were low. No visible algal blooms or aquatic macrophytes were reported by field limnologists.

B. Rate-Limiting Nutrient:

Algal assay results indicate that Martin Lake was limited by available phosphorus levels. Spikes with phosphorus, and nitrogen and phosphorus simultaneously result in increases in assay yield. Addition of nitrogen alone did not stimulate a growth response. The ratios of inorganic nitrogen to orthophosphorus (N/P) in sampled waters substantiate phosphorus limitation for all four sampling rounds.

*See Appendix E.

C. Nutrient Controllability:

1. Point sources -

The mean annual phosphorus load from point sources was estimated to be 29.0% of the total load reaching Martin Lake. Of that load, Alexander City contributed a total of 26.5% from five wastewater treatment plants. The remaining three known point sources contributed 2.5% of the total load.

The present loading of 1.35 g $P/m^2/yr$ is slightly above the eutrophic level proposed by Vollenweider for lakes with such volume and retention time. However, Vollenweider's oligotrophic and eutrophic levels may be too low for southeastern piedmont reservoirs (including Martin Reservoir) which receive heavy sediment loading, since sediments effectively combine with nutrients (nitrates and phosphates) making them unavailable for biological activity (Raschke 1975).

2. Nonpoint sources -

The mean annual phosphorus load from nonpoint sources was about 71.0% of the total reaching Martin Lake. The Tallapoosa River contributed 58.9% of the total load, and ungaged drainage areas were estimated to have contributed 4.0%.

Regardless of the primary nutrient limitation suggested by either algal assay or nutrient ratios, the most feasible approach to nutrient control, if desirable, is through available phosphorus control technology and subsequent establishment of phosphorus limitation within the water body. In Martin Lake, it would be expected that removal of the known point sources would result in further improvement of water quality.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS:

Lake and drainage basin characteristics are itemized below. Lake surface area and mean depth were provided by the Alabama Water Improvement Commission; maximum depth was estimated on the basis of National Eutrophication Survey (NES) sampling data; tributary data were provided by the Alabama District Office of the U.S. Geological Survey (USGS) (outlet drainage area includes the lake surface area). Mean hydraulic retention time was obtained by dividing the lake volume by mean flow of the outlet. Precipitation values are estimated by methods as outlined in NES Working Paper No. 175. A table of metric/English conversions is included as Appendix A.

A. Lake Morphometry:

1. Surface area: 157.83 km^2
2. Mean depth: 12.9 meters.
3. Maximum depth: 37.0 meters.
4. Volume: 2,036.007 x 10^6 m^3.
5. Mean hydraulic retention time: 176 days.

B. Tributary and Outlet (see Appendix B for flow data):

1. Tributaries -

Name	Drainage area(km^2)	Mean flow (m^3/sec)
A(1) Tallapoosa River	5,273.2	83.17
B(1) Emuckfaw Creek	173.0	3.22
C(1) Timbergut Creek	40.1	0.71
D(1) Hillabee Creek	735.6	12.31
E(1) Elkahatchee Creek	86.5	0.97
F(1) Buck Creek	51.0	1.30
G(1) Sandy Creek (north and south forks)	404.0	7.34
H(1) Oakachoy Creek	43.2	0.32
Minor tributaries and immediate drainage -	709.9	14.20
Totals	7,516.4	123.54
2. Outlet - A(2) Tallapoosa R.	7,674.2	133.88

C. Precipitation:

1. Year of sampling: 188.4 cm.
2. Mean annual: 141.3 cm.

III. LAKE WATER QUALITY SUMMARY

Martin Lake was sampled four times during the open-water season of 1973 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from seven stations on the lake and from a number of depths at each station (see map, page v). During each visit, depth-integrated samples were collected from each station for chlorophyll a analysis and phytoplankton identification and enumeration. During the first visit, an 18.9-liter depth-integrated sample was composited for algal assays. Maximum depths sampled were 29.0 meters at Station 1, 29.0 meters at Station 2, 29.3 meters at Station 3, 35.1 meters at Station 4, 27.4 meters at Station 5, 18.3 meters at Station 6, and 19.8 meters at Station 7. For a more detailed explanation of NES methods, see NES Working Paper No. 175.

The results obtained are presented in full in Appendix C and are summarized in III-A for waters at the surface and at the maximum depth for each site. Results of the phytoplankton counts and chlorophyll a determinations are included in III-B. Results of the limiting nutrient study are presented in III-C.

MARTIN LAKE
STUDY CODE 3107

PHYSICAL AND CHEMICAL CHARACTERISTICS

PARAMETER	N*	(5/19/73) SSS = 7 RANGE	MEDIAN	MAX DEPTH RANGE (METERS)	N*	(6/16/73) SSS = 7 RANGE	MEDIAN	MAX DEPTH RANGE (METERS)	N*	(8/25/73) SSS = 7 RANGE	MEDIAN	MAX DEPTH RANGE (METERS)
TEMPERATURE (DEG CENT)												
0.-1.5 M DEPTH	12	13.0- 16.8	15.1	0.0- 1.2	12	21.5- 30.5	28.8	0.0- 1.5	7	28.4- 29.6	29.2	0.0- 0.0
MAX DEPTH**	7	9.7- 12.6	11.2	9.1- 24.0	7	16.2- 19.8	17.5	16.8- 29.0	7	18.0- 22.3	19.8	15.2- 29.3
DISSOLVED OXYGEN (MG/L)												
0.-1.5 M DEPTH	5	9.8- 10.1	10.3	1.2- 1.2	5	8.4- 9.2	8.8	1.5- 1.5	7	7.2- 7.6	7.4	0.0- 0.0
MAX DEPTH**	7	9.1- 9.4	9.6	9.1- 24.0	7	0.2- 4.5	2.8	16.8- 29.0	7	0.0- 0.4	0.1	15.2- 29.3
CONDUCTIVITY (UMHOS)												
0.-1.5 M DEPTH	12	50.- 50.	50.	0.0- 1.2	12	50.- 50.	50.	0.0- 1.5	7	32.- 43.	38.	0.0- 0.0
MAX DEPTH**	7	50.- 50.	50.	9.1- 24.0	7	50.- 50.	50.	16.8- 29.0	7	33.- 70.	48.	15.2- 29.3
PH (STANDARD UNITS)												
0.-1.5 M DEPTH	12	7.3- 7.6	7.4	0.0- 1.2	12	7.5- 8.4	7.4	0.0- 1.5	7	6.8- 7.1	7.0	0.0- 0.0
MAX DEPTH**	7	7.1- 7.5	7.4	9.1- 24.0	7	7.1- 7.4	7.3	16.8- 29.0	7	5.8- 6.5	6.1	15.2- 29.3
TOTAL ALKALINITY (MG/L)												
0.-1.5 M DEPTH	12	10.- 11.	10.	0.0- 1.2	12	7.- 19.	12.	0.0- 1.5	7	11.- 15.	13.	0.0- 0.0
MAX DEPTH**	7	10.- 10.	10.	9.1- 24.0	7	11.- 19.	13.	16.8- 29.0	7	13.- 27.	14.	15.2- 29.3
TOTAL P (MG/L)												
0.-1.5 M DEPTH	12	0.017-0.028	0.020	0.0- 1.2	12	0.009-0.027	0.014	0.0- 1.5	7	0.007-0.027	0.009	0.0- 0.0
MAX DEPTH**	7	0.012-0.045	0.021	9.1- 24.0	7	0.008-0.053	0.017	16.8- 29.0	7	0.008-0.068	0.014	15.2- 29.3
DISSOLVED ORTHO P (MG/L)												
0.-1.5 M DEPTH	12	0.002-0.006	0.003	0.0- 1.2	12	0.002-0.018	0.002	0.0- 1.5	7	0.004-0.018	0.006	0.0- 0.0
MAX DEPTH**	7	0.003-0.016	0.004	9.1- 24.0	7	0.002-0.013	0.005	16.8- 29.0	7	0.003-0.037	0.007	15.2- 29.3
NO2+NO3 (MG/L)												
0.-1.5 M DEPTH	12	0.120-0.220	0.145	0.0- 1.2	12	0.050-0.120	0.055	0.0- 1.5	7	0.030-0.080	0.040	0.0- 0.0
MAX DEPTH**	7	0.130-0.260	0.200	9.1- 24.0	7	0.080-0.290	0.200	16.8- 29.0	7	0.030-0.250	0.050	15.2- 29.3
AMMONIA (MG/L)												
0.-1.5 M DEPTH	12	0.040-0.070	0.050	0.0- 1.2	12	0.050-0.110	0.075	0.0- 1.5	7	0.040-0.060	0.060	0.0- 0.0
MAX DEPTH**	7	0.030-0.070	0.050	9.1- 24.0	7	0.050-0.250	0.110	16.8- 29.0	7	0.020-0.660	0.320	15.2- 29.3
KJELDAHL N (MG/L)												
0.-1.5 M DEPTH	12	0.200-0.600	0.300	0.0- 1.2	12	0.200-0.700	0.400	0.0- 1.5	7	0.500-0.800	0.500	0.0- 0.0
MAX DEPTH**	7	0.200-0.200	0.200	9.1- 24.0	7	0.200-0.500	0.300	16.8- 29.0	7	0.200-1.200	0.600	15.2- 29.3
SECCHI DISC (METERS)												
	7	0.3- 1.4	1.2		7	1.5- 2.1	2.0		7	1.4- 2.8	2.3	

* N = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE
*** S = NO. OF SITES SAMPLED ON THIS DATE

MARTIS LAKE
STORET CODE 0107

PHYSICAL AND CHEMICAL CHARACTERISTICS

(11/ 1/73)

Sooo = 7

PARAMETER	%*	RANGE	MEDIAN	MAX DEPTH RANGE (METERS)
TEMPERATURE (DEGREES C)				
0.-1.5 M DEPTH	4	20.8- 21.5	21.1	0.0- 1.5
MAX DEPTH**	7	16.9- 20.7	20.5	7.6- 35.1
DISSOLVED OXYGEN (MG/L)				
0.-1.5 M DEPTH	1	5.0- 5.0	5.0	1.5- 1.5
MAX DEPTH**	7	3.0- 7.8	6.4	7.6- 35.1
CONDUCTIVITY (UMHOS)				
0.-1.5 M DEPTH	4	31.- 40.	32.	0.0- 1.5
MAX DEPTH**	7	32.- 64.	37.	7.6- 35.1
PH (STANDARD UNITS)				
0.-1.5 M DEPTH	4	6.6- 7.4	6.7	0.0- 1.5
MAX DEPTH**	7	6.6- 7.0	6.7	7.6- 35.1
TOTAL ALKALINITY (MG/L)				
0.-1.5 M DEPTH	4	10.- 16.	12.	0.0- 1.5
MAX DEPTH**	7	10.- 20.	13.	7.6- 35.1
TOTAL P (MG/L)				
0.-1.5 M DEPTH	4	0.010-0.036	0.018	0.0- 1.5
MAX DEPTH**	7	0.014-0.059	0.038	7.6- 35.1
DISSOLVED ORTHO P (MG/L)				
0.-1.5 M DEPTH	4	0.004-0.004	0.004	0.0- 1.5
MAX DEPTH**	7	0.004-0.010	0.005	7.6- 35.1
NO2+NO3 (MG/L)				
0.-1.5 M DEPTH	4	0.030-0.046	0.033	0.0- 1.5
MAX DEPTH**	7	0.020-0.046	0.038	7.6- 35.1
AMMONIA (MG/L)				
0.-1.5 M DEPTH	4	0.070-0.170	0.090	0.0- 1.5
MAX DEPTH**	4	0.070-0.780	0.095	7.6- 35.1
KJELDAHL N (MG/L)				
0.-1.5 M DEPTH	4	0.290-0.490	0.300	0.0- 1.5
MAX DEPTH**	7	0.290-1.000	0.290	7.6- 35.1
SECCHI DISC (METERS)	7	0.9- 2.1	1.2	

* % = NO. OF SAMPLES
** MAXIMUM DEPTH SAMPLED AT EACH SITE
*** S = NO. OF SITES SAMPLED ON THIS DATE

B. Biological Characteristics:

1. Phytoplankton -

Sampling Date	Dominant Genera	Algal Units per ml
03/13/73	1. Flagellates	1,667
	2. Melosira	538
	3. Ankistrodesmus	398
	4. Cryptomonas	150
	5. Dinoflagellates	97
	Other genera	86
	Total	2,936
06/16/73	1. Anabaena	590
	2. Flagellates	197
	3. Peridinium	172
	4. Unknown filament	148
	5. Cyclotella	74
	Other genera	147
	Total	1,328
08/25/73	1. Anabaena	1,208
	2. Dactylococcopsis	1,060
	3. Lyngbya	789
	4. Staurastrum	468
	5. Peridinium	222
	Other genera	1,479
	Total	5,226
11/01/73	1. Melosira	623
	2. Cryptomonas	566
	3. Flagellates	397
	4. Dactylococcopsis	198
	5. Synedra	142
	Other genera	877
	Total	2,803

2. Chlorophyll *a* -

Sampling Date	Station Number	Chlorophyll *a* (µg/l)
03/19/73	1	1.4
	2	---
	3	1.6
	4	1.5
	5	1.7
	6	2.1
	7	2.3
06/18/73	1	7.7
	2	11.2
	3	13.8
	4	12.7
	5	9.2
	6	16.4
	7	27.3
08/25/73	1	7.7
	2	7.2
	3	6.3
	4	5.0
	5	4.8
	6	4.8
	7	4.7
11/01/73	1	5.9
	2	2.9
	3	2.9
	4	1.9
	5	2.3
	6	2.9
	7	4.8

C. Limiting Nutrient Study:

1. Autoclaved, filtered, and nutrient spiked -

Spike(mg/l)	Ortho P Conc.(mg/l)	Inorganic N Conc.(mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.013	0.192	0.1
0.010 P	0.023	0.192	3.3
0.020 P	0.033	0.192	5.2
0.050 P	0.063	0.192	7.0
0.025 P + 0.5 N	0.038	0.692	9.4
0.050 P + 1.0 N	0.063	1.192	20.2
1.0 N	0.013	1.192	0.1

2. Filtered and nutrient spiked -

Control	0.007	0.195	0.2
0.010 P	0.017	0.195	4.0
0.020 P	0.027	0.195	5.4
0.050 P	0.057	0.195	6.1
0.025 P + 0.5 N	0.032	0.695	10.8
0.050 P + 1.0 N	0.057	1.195	20.0
1.0 N	0.007	1.195	0.1

3. Discussion

The control yield of the assay alga, Selenastrum capricornutum, indicates that the potential for primary production in Martin Lake was low at the time of sample analysis. An increase in yield with the addition of phosphorus as well as a lack of response when only nitrogen was added indicates phosphorus limitation. Maximum growth potential was achieved with the simultaneous addition of both phosphorus and nitrogen.

The N/P ratio in the field was about 55/1, indicating that the lake was phosphorus limited at the time of assay

sample collection. The mean N/P ratio for the entire sampling year in Martin Lake was 33/1, also indicating phosphorus limitation.

IV. NUTRIENT LOADINGS
(See Appendix D for data)

For the determination of nutrient loadings, the Alabama National Guard collected monthly near-surface grab samples from each of the tributary sites indicated (see map), except for the high runoff months of January and February when two samples were collected. Sampling was begun in March 1973, and was completed in February 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the Alabama District Office of the USGS for the tributary sites nearest the lake.

In this report, nutrient loads for sampled tributaries were determined by using a modification of the USGS computer program for calculating stream loadings. Nutrient loads indicated for tributaries are those measured minus known point source loads, if any.

Nutrient loadings for unsampled "minor tributaries and immediate drainage" ("ZZ" of USGS) were estimated by using the mean annual nutrient loads, in $kg/km^2/year$, for Emuckfaw Creek and Timbergut Creek at Stations B(1) and C(1), and multiplying the means by the ZZ drainage area in km^2.

The operators of the Wadley and Alexander City (Spring Hill, Sugar Creek, Dobbs Creek, Christian Creek, and Coley Creek) wastewater treatment plants provided monthly effluent samples and corresponding flow data. Nutrient loads for the cities of Camp Hill and Dadeville wastewater treatment plants were estimated at 1.134 kg P and 3.401 kg N/Capita/year.

A. Waste Sources:

1. Known municipal -

Name	Population Served	Treatment	Mean Flow ($m^3/d \times 10^3$)	Receiving Water
Wadley	626*	1	0.201	Hutton Creek/ Tallapoosa River
Spring Hill (Alexander City)	1,500	2	1.703	Elkahatchee River
Sugar Creek (Alexander City)	1,000	1	17.596	Sugar Creek/ Elkahatchee River
Dobbs Creek (Alexander City)	1,749	3	2.366	Dobbs Creek/Sandy Creek/Hillabee Creek
Christian Creek (Alexander City)	2,300	3	2.892	Sandy Creek/ Hillabee Creek
Camp Hill	900	1	0.341**	South Fork Sandy Creek
Dadeville Lagoon	1,200***	1	0.454**	Sandy Creek
Dadeville Raw Outfall	1,647	4	0.623**	Sandy Creek
Coley Creek (Alexander City)	3,000	3	2.941	Coley Creek/ Hillabee Creek

2. Known industial - None

1. Stabilization pond
2. Trickling filter
3. Activated sludge
4. Untreated

*1970 Census.
**Estimated at 0.3785 m^3/capita/day.
***U.S. EPA, 1971.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	kg P/yr	% of total
a. Tributaries (nonpoint load) -		
A(1) Tallapoosa River	125,695	58.9
B(1) Emuckfaw Creek	2,035	1.0
C(1) Timbergut Creek	470	0.2
D(1) Hillabee Creek	7,420	3.5
E(1) Elkahatchee Creek	190	0.1
F(1) Buck Creek	920	0.4
G(1) Sandy Creek (north and south forks)	2,920	1.4
H(1) Oakachoy Creek	455	0.2
b. Minor tributaries and immediate drainage (nonpoint load) -	8,520	4.0
c. Known municipal STP's -		
Wadley	410	0.2
Spring Hill (Alexander City)	1,625	0.8
Sugar Creek (Alexander City)	44,675	20.9
Dobbs Creek (Alexander City)	2,820	1.3
Christian Creek (Alexander City)	2,015	1.0
Camp Hill	1,020	0.5
Dadeville Lagoon	1,360	0.6
Dadeville Raw Outfall	2,615	1.2
Coley Creek (Alexander City)	5,390	2.5
d. Septic tanks* -	30	<0.1
e. Known industrial - None		
f. Direct precipitation** -	2,760	1.3
Total	213,345	100.0

2. Outputs - A(2) Tallapoosa River 81,110

3. Net annual P accumulation - 132,235

*Estimate based on 90 lakeshore residences and 3 camps.
**Estimated (See NES Working Paper No. 175).

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source	kg N/yr	% of total
a. Tributaries (nonpoint load) -		
A(1) Tallapoosa River	1,647,675	60.3
B(1) Emuckfaw Creek	50,395	1.8
C(1) Timbergut Creek	9,890	0.4
D(1) Hillabee Creek	250,465	9.2
E(1) Elkahatchee Creek	24,935	0.9
F(1) Buck Creek	34,955	1.3
G(1) Sandy Creek (north and south forks)	216,210	7.9
H(1) Oakachoy Creek	6,970	0.3
b. Minor tributaries and immediate drainage (nonpoint load) -	190,935	7.0
c. Known municipal STP's -		
Wadley	630	<0.1
Spring Hill (Alexander City)	5,045	0.2
Sugar Creek (Alexander City)	86,410	3.2
Dobbs Creek (Alexander City)	6,165	0.2
Christian Creek (Alexander City)	5,345	0.2
Camp Hill	3,060	0.1
Dadeville Lagoon	4,080	0.1
Dadeville Raw Outfall	7,020	0.3
Coley Creek (Alexander City)	10,320	0.4
d. Septic tanks* -	1,170	<0.1
e. Known industrial - None		
f. Direct precipitation** -	170,395	6.2
Total	2,732,070	100.0

2. Outputs - A(1) Tallapoosa River 3,572,695

3. Net annual N export*** - 840,625

*Estimate based on 90 lakeshore residences and 3 camps.
**Estimated (See NES Working Paper No. 175).
***Export probably due to unknown sources and/or sampling errors.

D. Mean Annual Nonpoint Nutrient Export by Subdrainage Area:

Tributary	kg P/km^2/yr	kg N/km^2/yr
A(1) Tallapoosa River	24	312
B(1) Emuckfaw Creek	12	291
C(1) Timbergut Creek	12	247
D(1) Hillabee Creek	10	340
E(1) Elkahatchee Creek	2	288
F(1) Buck Creek	18	685
G(1) Sandy Creek (north and south forks)	7	535
H(1) Oakachoy Creek	11	161

F. Yearly Loadings:

In the following table, the existing phosphorus annual loading is compared to the relationship proposed by Vollenweider (1975). Essentially, his eutrophic loading is that at which the receiving waters would become eutrophic or remain eutrophic; his oligotrophic loading is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic loading would be considered one between eutrophic and oligotrophic.

Note that Vollenweider's model may not apply to lakes with short hydraulic retention times or in which light penetration is severely restricted by high concentrations of suspended solids in the surface waters.

	Total Yearly Phosphorus Loading ($g/m^2/yr$)
Estimated loading for Martin Lake	1.35
Vollenweider's eutrophic loading	1.00
Vollenweider's oligotrophic loading	0.50

V. LITERATURE REVIEWED

Raschke, R. L. 1975. Personal communication. Environmental Protection Agency, Surveillance and Analysis Division, Athens, Georgia.

U.S. EPA. 1971. A 1968 Inventory of Municipal Waste Facilities, Vol. 4. EPA Publication No. OWP-1. U.S. Govt. Print. Off., Washington, D.C.

U.S. Environmental Protection Agency. 1975. National Eutrophication Survey Methods 1973-1976. Working Paper No. 175. National Environmental Research Center, Las Vegas, Nevada, and Pacific Northwest Environmental Research Laboratory, Corvallis, Oregon.

Vollenweider, R. A., 1975. Input-Output Models With Final Reference to the Phosphorus Loading Concept in Limnology. Schweiz. A. Hydrol. 37: 53-84.

VI. APPENDICES

APPENDIX A

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX B

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR ALABAMA 07/22/76

LAKE CODE 0107 MARTIN LAKE

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 7674.2

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
0107A1	5273.2	113.55	138.75	161.69	141.58	86.08	58.76	55.93	46.44	33.27	31.86	50.97	82.83	83.16
0107A2	[illegible]	123.12	151.67	191.98	196.32	141.87	108.43	97.38	102.65	115.19	119.16	127.28	133.49	133.86
0107B1	[illegible]	3.96	5.80	6.51	6.94	3.40	2.35	1.98	1.25	1.10	1.25	1.44	2.97	3.22
0107C1	[illegible]	0.85	1.30	1.44	1.53	0.74	0.54	0.40	0.26	0.23	0.26	0.31	0.65	0.71
0107D1	[illegible]	15.01	22.65	25.49	27.18	13.03	8.78	6.94	4.53	3.96	4.39	5.24	11.33	12.30
0107E1	[illegible]	1.36	1.81	2.15	2.01	0.96	0.59	0.54	0.34	0.24	0.23	0.51	0.91	0.97
0107F1	51.9	1.81	2.18	2.46	2.44	1.36	0.93	0.85	0.59	0.45	0.45	0.82	1.30	1.30
0107G1	404.0	10.19	12.74	14.72	13.88	7.65	5.10	4.67	3.11	2.41	2.35	4.39	7.22	7.34
0107H1	43.3	0.453	0.623	0.765	0.709	0.311	0.184	0.164	0.096	0.068	0.065	0.153	0.311	0.323
0107ZZ	867.6	19.96	25.77	29.73	28.03	14.58	9.34	8.50	5.52	4.11	4.11	8.07	13.59	14.20

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 7674.2
SUM OF SUB-DRAINAGE AREAS = 7674.4
TOTAL FLOW IN = 1488.58
TOTAL FLOW OUT = 1608.45

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
0107A1	3	73	249.188	4	102.224				
	4	73	276.089	8	672.525				
	5	73	254.852	16	128.842				
	6	73	133.089	10	169.901				
	7	73	64.562	15	75.748				
	8	73	47.431	5	38.511				
	9	73	31.149	16	36.246				
	10	73	43.891	18	38.228				
	11	73	39.077	11	31.432				
	12	73	117.515	16	64.562				
	1	74	288.832	6	215.209	20	125.160		
	2	74	227.951	5	219.456	20	219.456		
0107A2	3	73	287.704						
	4	73	228.205	7	485.917				
	5	73	210.876	16	182.927				
	6	73	110.094	9	364.948				
	7	73	53.094	14	96.560				
	8	73	38.936	5	7.646				
	9	73	24.607	15	137.903	16	0.991		
	10	73	36.132	18	24.777				
	11	73	32.196	11	81.213				
	12	73	47.094	15	60.825				
	1	74	238.881	5	177.830	20	103.640		
	2	74	187.644	5	181.228	20	141.228		

TRIBUTARY FLOW INFORMATION FOR ALABAMA 07/22/76

LAKE CODE 0107 MARTIN LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
0107d1	3	73	9.345	4	4.134				
	4	73	9.203	8	18.689				
	5	73	9.769	16	6.230				
	6	73	6.060	10	6.654				
	7	73	3.171	15	2.039				
	8	73	2.718	5	1.303				
	9	73	2.067	16	0.963				
	10	73	1.982	18	0.736				
	11	73	2.124	11	0.906				
	12	73	3.426	16	2.832				
	1	74	7.079	5	8.920	20	3.738		
	2	74	6.966	5	3.964	20	7.306		
0107c1	3	73	2.180	4	0.906				
	4	73	2.067	7	5.947				
	5	73	2.237	16	1.359				
	6	73	1.359	10	1.472				
	7	73	0.680	15	0.425				
	8	73	0.595	5	0.269				
	9	73	0.453	16	0.195				
	10	73	0.425	18	0.181				
	11	73	0.453	11	0.184				
	12	73	0.736	16	0.623				
	1	74	1.586	5	2.039	20	0.821		
	2	74	1.557	5	0.878	20	1.642		
0107d1	3	73	38.228	4	16.084				
	4	73	36.953	8	78.381				
	5	73	39.644	16	24.636				
	6	73	23.786	3	23.361				
	7	73	12.176	15	7.646				
	8	73	10.194	5	4.672				
	9	73	7.702	16	3.455				
	10	73	7.362	18	2.633				
	11	73	7.787	11	3.171				
	12	73	13.026	16	10.760				
	1	74	28.175	6	25.485	20	14.442		
	2	74	27.751	5	15.291	20	28.883		
0107e1	3	73	3.681	4	1.246	25	6.456		
	4	73	3.059	28	3.625				
	5	73	2.860	24	2.039				
	6	73	1.642	23	0.991				
	7	73	0.793						
	8	73	0.425	5	0.396				
	9	73	0.229	15	0.283				
	10	73	0.232	9	0.193				
	11	73	0.311	15	0.173				
	12	73	0.736	18	0.311				
	1	74	2.180	5	2.973	9	2.039	19	0.680
	2	74	2.322	2	1.218				

TRIBUTARY FLOW INFORMATION FOR ALABAMA 07/22/76

LAKE CODE 0107 MARTIN LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
0107F1	3	73	3.851	4	1.671				
	4	73	3.341	8	2.124				
	5	73	3.143	16	1.727				
	6	73	2.039	9	2.605				
	7	73	1.189	14	1.869				
	8	73	0.708	5	0.680				
	9	73	0.453	16	0.453				
	10	73	0.453	18	0.340				
	11	73	0.566	11	0.481				
	12	73	1.104	16	0.906				
	1	74	2.549	5	3.285	20	1.189		
	2	74	2.690	5	1.274	20	2.775		
0107G1	3	73	22.795	4	9.486				
	4	73	19.822	8	12.459				
	5	73	18.972	16	9.769				
	6	73	11.610	9	15.574				
	7	73	6.570	14	10.760				
	8	73	3.794	4	3.794				
	9	73	2.350	16	2.467				
	10	73	2.379	18	1.841				
	11	73	3.058	11	2.549				
	12	73	6.088	15	3.964				
	1	74	14.866	5	19.539	20	6.513		
	2	74	15.574	5	7.079	20	16.141		
0107H1	3	73	1.359	3	0.311	25	2.520		
	4	73	1.133	28	1.331				
	5	73	1.048	24	0.708				
	6	73	0.566	23	0.340				
	7	73	0.261	14	0.510				
	8	73	0.125						
	9	73	0.062	15	0.085				
	10	73	0.065	9	0.054				
	11	73	0.091	15	0.048				
	12	73	0.235	18	0.091				
	1	74	0.765	5	1.076	9	0.736	19	0.215
	2	74	0.821	2	0.396				
0107Z2	3	73	47.572	3	14.300	4	18.576	25	79.004
	4	73	41.059	7	111.852	8	24.834	28	47.572
	5	73	37.378	16	19.255	24	28.317		
	6	73	22.937	9	30.865	10	27.439	23	14.980
	7	73	12.318	14	21.039	15	26.505		
	8	73	6.739	4	6.796	5	6.371		
	9	73	3.904	15	5.097	16	4.106		
	10	73	3.964	9	3.455	18	2.888		
	11	73	5.324	11	4.502				
	12	73	11.327	15	7.079	16	9.061	18	5.239
	1	74	29.025	5	39.927	19	28.317	20	12.318
	2	74	31.149	2	17.840	5	13.309	20	32.564

APPENDIX C

PHYSICAL AND CHEMICAL DATA

STORET RETRIEVAL DATE 76/07/22

010701
32 52 30.0 085 54 30.0 3
MARTIN LAKE
01123 ALABAMA
033491

11EPALES 2111202
0062 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/19	09 20	0000	13.2		40	50K	7.40	10	0.070	0.600	0.220	0.005
	09 20	0004	13.0	10.0		50K	7.50	10K	0.040	0.200	0.200	0.003
	09 20	0015	13.0	9.9		50K	7.50	10K	0.050	0.200K	0.200	0.003
	09 20	0035	12.7	10.0		50K	7.50	10K	0.040	0.200K	0.200	0.003
	09 20	0055	11.8	9.8		50K	7.50	10K	0.050	0.200K	0.220	0.004
	09 20	0075	10.2	9.6		50K	7.40	10K	0.060	0.200K	0.260	0.009
	09 20	0095	9.7	9.6		50K	7.50	10K	0.050	0.200K	0.260	0.016
73/06/16	09 50	0000	28.5		60	50K	7.60	11	0.110	0.600	0.120	0.018
	09 50	0006	27.1	9.2		50K	8.00	9	0.080	0.300	0.090	0.012
	09 50	0015	23.1	6.3		50K	7.80	12	0.140	0.200K	0.260	0.013
	09 50	0030	22.5	5.8		50K	7.60	12	0.110	0.400	0.240	0.014
	09 50	0045	20.7	3.6		50K	7.30	12	0.220	0.400	0.210	0.024
	09 50	0058	19.8	2.8		50K	7.20	13	0.250	0.500	0.220	0.013
73/08/25	09 50	0000	28.4	7.6	54	43	7.50	15	0.050	0.600	0.050	0.018
	09 50	0015	28.3			44						
	09 50	0024	27.5	2.2		43	6.60	13	0.040	0.300	0.200	0.008
	09 50	0032	25.6			47						
	09 50	0050	21.8	0.1		58	6.60	18	0.370	0.700	0.050	0.024
	09 50	0062	20.4	0.1		67	6.50	21	0.660	1.100	0.040	0.037
73/11/01	12 30	0000	21.0		60	40	7.40	16	0.100	0.200	0.060	0.008
	12 30	0005	20.8	5.0		40	7.20	14	0.090	0.200	0.060	0.006
	12 30	0015	20.6	7.2		40	7.10	13	0.100	0.200K	0.060	0.008
	12 30	0025	20.6	7.0		40	7.00	13	0.090	0.200K	0.060	0.005

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

010701
32 52 00.0 085 54 30.0 3
MARTIN LAKE
01123 ALABAMA
033491

11EPALES 2111202
0062 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/19	09 20	0000	0.028	1.4
	09 20	0004	0.025	
	09 20	0015	0.024	
	09 20	0035	0.024	
	09 20	0055	0.023	
	09 20	0075	0.032	
	09 20	0095	0.045	
73/06/16	09 50	0000	0.027	7.7
	09 50	0006	0.031	
	09 50	0015	0.049	
	09 50	0030	0.042	
	09 50	0045	0.053	
	09 50	0058	0.053	
73/08/25	09 50	0000	0.027	7.7
	09 50	0024	0.032	
	09 50	0050	0.054	
	09 50	0062	0.068	
73/11/01	12 30	0000	0.036	5.9
	12 30	0005	0.033	
	12 30	0015	0.036	
	12 30	0025	0.044	

STORET RETRIEVAL DATE 76/07/22

010702
32 49 00.0 085 53 45.0 3
MARTIN LAKE
01123 ALABAMA
033491

11EPALES 2111202
0080 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/19	10 30	0000	14.9		11	50K	7.50	10K	0.050	0.400	0.170	0.006
	10 30	0004	13.8	10.1		50K	7.50	10K	0.050	0.200	0.170	0.004
	10 30	0015	13.4	9.8		50K	7.50	10K	0.050	0.200K	0.170	0.004
	10 30	0025	13.0	10.0		50K	7.50	10K	0.050	0.200K	0.180	0.004
	10 30	0050	12.0	9.8		50K	7.40	10	0.050	0.200K	0.200	0.004
	10 30	0075	10.2	9.6		50K	7.40	10K	0.070	0.200K	0.260	0.007
73/06/16	10 35	0000	28.0		60	50K	8.40	7	0.070	0.400	0.070	0.003
	10 35	0006	28.1	9.1		50K	8.50	7	0.070	0.200	0.070	0.004
	10 35	0015	23.8	6.0		50K	8.00	9	0.080	0.200	0.170	0.005
	10 35	0030	21.9	5.1		50K	7.70	8	0.140	0.200	0.230	0.012
	10 35	0045	20.7	5.1		50K	7.60	8	0.140	0.200	0.200	0.007
	10 35	0060	19.1	4.9		50K	7.50	10	0.100	0.200	0.240	0.009
	10 35	0076	17.4	4.5		50K	7.30	11	0.110	0.200K	0.290	0.009
73/08/25	10 25	0000	28.6	7.4	84	38	7.00	12	0.040	0.500	0.030	0.016
	10 25	0015	28.4			37						
	10 25	0024	28.3	6.2		38	6.60	11	0.030	0.400	0.040	0.006
	10 25	0035	24.6	0.1		40	6.00	15	0.050	0.300	0.060	0.004
	10 25	0055	21.3	1.0		32	5.90	10	0.040	0.300	0.230	0.010
	10 25	0075	19.8	0.4		34	5.90	13	0.060	0.400	0.250	0.005
73/11/01	12 10	0000	21.5		36	36	6.90	11	0.120	0.400	0.060	0.004
	12 10	0010	21.3	7.2		36	6.90	10	0.110	0.200	0.060	0.007
	12 10	0030	21.0	6.8		3[illegible]	6.90	11	0.120	0.200K	0.060	0.005
	12 10	0060	20.9	6.6		3[illegible]	6.70	12	0.120	0.200	0.060	0.007
	12 10	0080	20.0	6.4		38	6.60	14	0.110	0.300	0.050	0.007
	12 10	0095	19.5	6.4		37	6.60	16	0.100	0.300	0.060	0.005

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

010702
32 49 00.0 085 53 45.0 3
MARTIN LAKE
01123 ALABAMA
033491

11EPALES 2111202
0080 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/19	10 30	0000	0.020	
	10 30	0004	0.019	
	10 30	0015	0.018	
	10 30	0025	0.019	
	10 30	0050	0.020	
	10 30	0075	0.029	
73/06/16	10 35	0000	0.023	11.2
	10 35	0006	0.025	
	10 35	0015	0.033	
	10 35	0030	0.042	
	10 35	0045	0.040	
	10 35	0060	0.031	
	10 35	0076	0.030	
73/08/25	10 25	0000	0.015	7.2
	10 25	0024	0.015	
	10 25	0035	0.022	
	10 25	0055	0.016	
	10 25	0075	0.021	
73/11/01	12 10	0000	0.023	2.9
	12 10	0010	0.022	
	12 10	0030	0.027	
	12 10	0060	0.028	
	12 10	0080	0.062	
	12 10	0095	0.059	

STORET RETRIEVAL DATE 76/07/22

010703
32 44 40.0 085 50 35.0 3
MARTIN LAKE
01123 ALABAMA
033491

11EPALES 2111202
0085 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/19	11	15 0000	15.4		48	50K	7.30	10K	0.050	0.400	0.140	0.003
	11	15 0004	14.8	9.9		50K	7.60	10	0.050	0.200	0.150	0.002
	11	15 0015	14.0	9.6		50K	7.40	10	0.030	0.200K	0.160	0.003
	11	15 0030	12.3	9.7		50K	7.40	10	0.040	0.200	0.180	0.003
	11	15 0040	11.5	9.7		50K	7.50	10	0.030	0.200K	0.190	0.003
73/06/18	10	10 0000	28.9		66	50K	8.00	12	0.070	0.700	0.050	0.002K
	10	10 0005	28.6	8.4		50K	8.10	13	0.050	0.300	0.050	0.002K
	10	10 0015	27.4	8.4		50K	7.70	13	0.070	0.200	0.060	0.002K
	10	10 0020	24.4	6.2		50K	7.30	16	0.080	0.200K	0.060	0.002K
	10	10 0030	21.5	4.1		50K	7.30	14	0.100	0.200K	0.150	0.002K
	10	10 0050	20.2	4.3		50K	7.20	15	0.070	0.300	0.130	0.002K
	10	10 0065	19.0	3.6		50K	7.20	14	0.140	0.200	0.220	0.002
	10	10 0080	17.2	1.8		50K	7.10	17	0.090	0.400	0.200	0.005
73/08/25	12	40 0000	29.2	7.2	80	38	6.80	13	0.060	0.600	0.060	0.006
	12	40 0015	28.6	6.8		37	6.40	11	0.040	0.500	0.040	0.005
	12	40 0030	27.1	0.1		40	5.90	14	0.040	0.300	0.060	0.006
	12	40 0045	22.5	0.1		38	5.90	14	0.100	0.400	0.040	0.009
	12	40 0070	20.1	0.1		39	5.90	15	0.120	0.400	0.020	0.007
	12	40 0096	18.0	0.1		70	6.30	27	0.620	1.200	0.050	0.006
73/11/01	11	50 0000	21.3		36	32	6.80	12	0.070	0.300	0.030	0.005
	11	50 0010	20.8	7.4		32	6.80	11	0.080	0.200K	0.040	0.013
	11	50 0025	20.7	7.2		32	6.80	11	0.080	0.200K	0.030	0.006
	11	50 0040	20.7	7.0		32	6.80	11	0.080	0.200K	0.030	0.004

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

010703
32 44 40.0 085 50 35.0 3
MARTIN LAKE
01123 ALABAMA
033491

11EPALES 2111202
0085 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/19	11 15	0000	0.018	1.6
	11 15	0004	0.017	
	11 15	0015	0.017	
	11 15	0030	0.018	
	11 15	0040	0.019	
73/06/18	10 10	0000	0.017	13.8
	10 10	0005	0.015	
	10 10	0015	0.022	
	10 10	0020	0.011	
	10 10	0030	0.011	
	10 10	0050	0.012	
	10 10	0065	0.009	
	10 10	0080	0.017	
73/08/25	12 40	0000	0.011	6.3
	12 40	0015	0.013	
	12 40	0030	0.014	
	12 40	0045	0.010	
	12 40	0070	0.009	
	12 40	0096	0.024	
73/11/01	11 50	0000	0.013	2.9
	11 50	0010	0.019	
	11 50	0025	0.018	
	11 50	0040	0.016	

STORET RETRIEVAL DATE 76/07/22

010704
32 44 40.0 085 50 35.0 3
MARTIN LAKE
01123 ALABAMA
033491

11EPALES 2111202
0100 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/19	13 40	0000	14.8		52	50K	7.40	11	0.050	0.400	0.120	0.004
	13 40	0008	14.4	9.6		50K	7.50	10K	0.040	0.200	0.120	0.003
	13 40	0015	14.0	10.1		50K	7.50	10K	0.050	0.200K	0.120	0.002
	13 40	0030	11.5	9.5		50K	7.50	10K	0.050	0.200K	0.140	0.003
73/06/18	13 30	0000	29.7		80	50K	7.70	10K	0.090	0.400	0.070	0.012
	13 30	0005	29.2	8.8		50K	8.30	10K	0.050	0.300	0.050	0.013
	13 30	0015	27.5	8.7		50K	8.10	10K	0.100	0.400	0.090	0.009
	13 30	0030	21.3	4.5		50K	7.70	10K	0.090	0.200K	0.160	0.007
	13 30	0050	20.3	4.8		50K	7.60	10K	0.090	0.200K	0.190	0.007
	13 30	0075	17.8	4.6		50K	7.50	11	0.060	0.200K	0.210	0.005
	13 30	0095	16.2	4.2		50K	7.40	11	0.050	0.200K	0.220	0.006
73/08/25	13 40	0000	29.3	7.6	90	32	7.70	13	0.060	0.800	0.040	0.004
	13 40	0015	28.9	7.2		35	6.90	12	0.060	0.500	0.060	0.003
	13 40	0030	28.3	7.2		35	6.20	12	0.060	0.500	0.020	0.004
	13 40	0045	23.1	0.1		33	5.80	13	0.050	0.200K	0.120	0.003
	13 40	0060	20.9	0.5		32	5.70	13	0.050	0.200K	0.160	0.003
	13 40	0081	19.5	0.4		33	5.80	14	0.020	0.200K	0.170	0.003
73/11/01	11 20	0000	21.5		84	31	6.60	13	0.090	0.400	0.030	0.006
	11 20	0010	21.3	6.4		31	6.60	10	0.080	0.200	0.020	0.006
	11 20	0030	21.3	5.6		31	6.50	10	0.080	0.200	0.030	0.004
	11 20	0060	21.3	5.8		31	6.50	17	0.070	0.200K	0.020	0.004
	11 20	0080	20.5	0.4		43	6.50	18	0.270	0.500	0.030	0.004
	11 20	0100	18.5	0.4		58	6.50	23	0.490	0.900	0.030	0.004
	11 20	0115	16.9	0.4		64	6.60	20	0.720	1.000	0.040	0.005

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

010704
32 44 40.0 085 50 35.0 3
MARTIN LAKE
01123 ALABAMA
033491

11EPALES 2111202
0100 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/19	13 40	0000	0.020	1.5
	13 40	0008	0.015	
	13 40	0015	0.013	
	13 40	0030	0.012	
73/06/18	13 30	0000	0.014	12.7
	13 30	0005	0.016	
	13 30	0015	0.024	
	13 30	0030	0.020	
	13 30	0050	0.027	
	13 30	0075	0.013	
	13 30	0095	0.010	
73/08/25	13 40	0000	0.009	5.0
	13 40	0015	0.009	
	13 40	0030	0.008	
	13 40	0045	0.008	
	13 40	0060	0.008	
	13 40	0081	0.008	
73/11/01	11 20	0000	0.013	1.9
	11 20	0010	0.010	
	11 20	0030	0.011	
	11 20	0060	0.011	
	11 20	0080	0.022	
	11 20	0100	0.024	
	11 20	0115	0.033	

STORET RETRIEVAL DATE 76/07/22

010705
32 43 15.0 085 55 55.0 3
MARTIN LAKE
01051 ALABAMA

033491

11EPALES 2111202
0080 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/19	14	15 0000	16.8		54	50K	7.40	10K	0.060	0.300	0.140	0.004
	14	15 0004	16.7	10.1		50K	7.40	10K	0.040	0.200	0.130	0.003
	14	15 0009	16.1	10.0		50K	7.40	10K	0.040	0.200	0.120	0.002
	14	15 0015	15.4	9.8		50K	7.40	12	0.050	0.200	0.140	0.003
	14	15 0025	12.2	9.8		50K	7.40	11	0.050	0.200K	0.200	0.003
	14	15 0040	11.2	9.8		50K	7.40	10	0.050	0.200K	0.200	0.003
73/06/18	14	25 0000	30.5		82	50K	7.70	11	0.100	0.400	0.050	0.004
	14	25 0005	28.8	9.0		50K	8.10	11	0.080	0.300	0.080	0.004
	14	25 0010	28.4	7.4		50K	8.40	12	0.070	0.300	0.040	0.002
	14	25 0015	25.0	4.8		50K	8.10	12	0.050	0.200	0.040	0.003
	14	25 0040	20.5	4.9		50K	7.80					
	14	25 0060	19.1	3.6		50K	7.60	12	0.080	0.200K	0.160	0.003
	14	25 0075	17.5	3.0		50K	7.40	13	0.050	0.200K	0.150	0.002K
73/08/25	14	15 0000	29.4	7.4	108	38	7.30	14	0.080	0.500	0.080	0.004
	14	15 0015	28.7	7.2		35	6.60	12	0.030	0.300	0.030	0.009
	14	15 0030	28.1	4.4		35	6.10	10	0.060	0.300	0.050	0.005
	14	15 0045	22.9	0.1		35	5.80	10	0.080	0.300	0.040	0.002
	14	15 0060	20.9	0.1		33	5.90	10	0.080	0.300	0.040	0.002
	14	15 0075	19.8	0.1		37	6.00	12	0.150	0.600	0.020	0.004
	14	15 0089	18.4	0.1		48	6.10	13	0.320	0.600	0.030	0.007
73/11/01	09	30 0000	21.2		68	31	6.70	10K	0.090	0.300	0.030	0.005
	09	30 0010	21.1	6.6		32	6.70	10K	0.090	0.200K	0.020	0.005
	09	30 0030	21.1	6.4		32	6.70	10K	0.090	0.200K	0.020	0.004
	09	30 0055	21.1	6.4		31	6.50	10K	0.090	0.200	0.020	0.004
	09	30 0075	20.9	7.0		32	6.50	12	0.150	0.400	0.030	0.010
	09	30 0090	19.4	1.4		52	6.70	20		0.200	0.020	0.007

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

010705
32 43 15.0 085 55 55.0 3
MARTIN LAKE
01051 ALABAMA

033491

11EPALES 2111202
0040 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/19	14 15	0000	0.020	1.7
	14 15	0004	0.020	
	14 15	0009	0.018	
	14 15	0015	0.024	
	14 15	0025	0.022	
	14 15	0040	0.024	
73/06/18	14 25	0000	0.009	9.2
	14 25	0005	0.012	
	14 25	0010	0.012	
	14 25	0015	0.013	
	14 25	0060	0.009	
	14 25	0075	0.008	
73/08/25	14 15	0000	0.007	4.8
	14 15	0015	0.010	
	14 15	0030	0.008	
	14 15	0045	0.007	
	14 15	0060	0.007	
	14 15	0075	0.010	
	14 15	0089	0.014	
73/11/01	09 30	0000	0.010	2.3
	09 30	0010	0.010	
	09 30	0030	0.015	
	09 30	0055	0.012	
	09 30	0075	0.016	
	09 30	0090	0.018	

37

STORET RETRIEVAL DATE 76/07/22

010706
32 44 15.0 086 01 10.0 3
MARTIN LAKE
01051 ALABAMA

033492

11EPALES 2111202
0060 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/19	14	50 0000	16.1		32	50K	7.40	11	0.050	0.300	0.120	0.003
	14	50 0004	16.1	9.6		50K	7.40	11	0.050	0.200	0.120	0.003
	14	50 0015	15.1	9.2		50K	7.40	11	0.050	0.200K	0.120	0.003
	14	50 0025	12.9	9.7		50K	7.40	12	0.060	0.200K	0.130	0.002
	14	50 0035	12.0	9.1		50K	7.10	10K	0.060	0.200	0.130	0.004
73/06/18	16	20 0000	21.5		82	50K	7.50	14	0.100	0.400	0.060	0.002K
	16	20 0005	28.6	8.8		56K	7.80	16	0.070	0.200	0.060	0.002K
	16	20 0015	24.5	10.8J		50K	7.70	14	0.060	0.200	0.050	0.002K
	16	20 0030	21.5	4.0		50K	7.50	14	0.100	0.200	0.090	0.002
	16	20 0055	19.4	0.2		50K	7.20	15	0.240	0.300	0.080	0.002K
73/08/25	16	10 0000	29.6	7.6	108	38	6.80	11	0.060	0.500	0.040	0.006
	16	10 0015	29.1	6.8		35	6.50	11	0.060	0.300	0.050	0.005
	16	10 0025	28.8	5.0		35	6.30	11	0.050	0.300	0.040	0.008
	16	10 0040	24.6	0.3		42	6.00	14	0.130	0.400	0.030	0.006
	16	10 0050	22.3	0.1		49	6.00	16	0.380	0.800	0.050	0.008
73/11/01	09	10 0000	20.9		48	32	6.70	10K	0.080	0.200	0.030	0.007
	09	10 0010	20.8	5.2		31	6.70	10	0.080	0.200K	0.030	0.004
	09	10 0035	20.8	7.0		32	6.70	10K	0.070	0.200	0.030	0.005
	09	10 0060	20.5	5.2		32	6.70	10K	0.080	0.200	0.030	0.005

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

STORET RETRIEVAL DATE 76/07/22

010706
32 44 15.0 086 01 10.0 3
MARTIN LAKE
01051 ALABAMA
033492

11EPALES 2111202
0060 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/19	14 50	0000	0.023	2.1
	14 50	0004	0.023	
	14 50	0015	0.019	
	14 50	0025	0.014	
	14 50	0035	0.019	
73/06/14	16 20	0000	0.011	16.4
	16 20	0005	0.014	
	16 20	0015	0.011	
	16 20	0030	0.007	
	16 20	0055	0.029	
73/08/25	16 10	0000	0.009	4.8
	16 10	0015	0.011	
	16 10	0025	0.011	
	16 10	0040	0.011	
	16 10	0050	0.010	
73/11/01	09 10	0000	0.013	2.9
	09 10	0010	0.013	
	09 10	0035	0.013	
	09 10	0060	0.014	

STORET RETRIEVAL DATE 76/07/22

010707
32 47 30.0 085 59 45.0 3
MARTIN LAKE
01123 ALABAMA

033491

11EPALES 2111202
0060 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/03/19	15 35	0000	16.2		49	50K	7.30	10K	0.050	0.500	0.150	0.004
	15 35	0006	15.6	10.0		50K	7.30	10K	0.040	0.200	0.140	0.003
	15 35	0015	14.7	9.6		50K	7.40	10K	0.050	0.200	0.200	0.006
	15 35	0035	12.8	9.6		50K	7.40	10K	0.040	0.200K	0.210	0.003
	15 35	0055	10.7	9.4		50K	7.30	10K	0.050	0.200K	0.230	0.004
73/06/18	17 00	0000	29.4		83	50K	7.70	16	0.090	0.500	0.050	0.002K
	17 00	0005	29.1	9.2		50K	8.20	19	0.060	0.200	0.050	0.002K
	17 00	0015	24.3	8.8		50K	8.00	16	0.070	0.300	0.050	0.002K
	17 00	0030	21.0	4.8		50K	7.70	16	0.070	0.200K	0.120	0.002K
	17 00	0055	19.2	1.8		50K	7.40	19	0.180	0.300	0.120	0.002K
73/08/25	16 40	0000	29.1	7.2	110	38	6.90	12	0.050	0.500	0.040	0.004
	16 40	0015	28.6	7.0		36	6.70	11	0.070	0.400	0.060	0.006
	16 40	0025	28.3	6.0		36	6.40	12	0.040	0.300	0.020	0.006
	16 40	0045	22.9	0.1		37	6.00	13	0.110	0.300	0.020	0.008
	16 40	0065	20.4	0.0		43	6.20	13	0.300	0.600	0.030	0.007
73/11/01	09 35	0000	20.9		48	32	6.70	10K	0.070	0.900	0.040	0.009
	09 35	0010	20.9	9.8		32	6.70	10K	0.060	0.200	0.030	0.007
	09 35	0030	20.8	7.4		32	6.70	10K	0.070	0.200	0.020	0.007
	09 35	0050	20.7	7.8		33	6.70	10K	0.070	0.200K	0.030	0.010

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

010707
32 47 30.0 085 59 45.0 3
MARTIN LAKE
01123 ALABAMA

033491

11EPALES 2111202
0060 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/03/19	15 35	0000	0.026	2.3
	15 35	0006	0.020	
	15 35	0015	0.020	
	15 35	0035	0.021	
	15 35	0055	0.021	
73/06/18	17 00	0000	0.014	27.3
	17 00	0005	0.012	
	17 00	0015	0.018	
	17 00	0030	0.011	
	17 00	0055	0.015	
73/08/25	16 40	0000	0.008	4.7
	16 40	0015	0.009	
	16 40	0025	0.010	
	16 40	0045	0.008	
	16 40	0065	0.009	
73/11/01	09 35	0000	0.024	4.8
	09 35	0010	0.017	
	09 35	0030	0.023	
	09 35	0050	0.030	

APPENDIX D

TRIBUTARY AND WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 76/07/22

010/A1 LS0107A1
32 58 30.0 085 44 30.0 4
TALLAPOOSA RIVER
01 MAP TALLAPOOSA C
1/MARTIN LAKE 033491
BRDG ON ST RT 49 NEAR HORSESHOE BATTLE G
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/04	11 10		0.168	0.100K	0.014	0.014	0.035
73/04/08	11 10		0.180	1.150	0.075	0.028	0.175
73/05/16	13 30		0.168	0.500	0.018	0.012	0.045
73/06/10	09 45		0.160	1.200	0.023	0.015	0.065
73/07/15	08 35		0.200	0.270	0.026	0.012	0.035
73/08/05	09 45		0.252	0.160	0.023	0.022	0.045
73/09/16	14 15		0.210	0.240	0.050	0.015	0.035
73/10/18	11 40		0.190	0.300	0.071	0.034	0.050
73/11/11	10 10		0.080	0.925	0.044	0.016	0.030
73/12/16	10 10		0.208	0.200	0.032	0.024	0.040
74/01/06	10 10		0.276	0.400	0.044	0.016	0.100
74/01/20	08 45		0.300	0.400	0.044	0.016	0.040
74/02/05	11 00		0.240	0.100	0.015	0.015	0.035
74/02/20	14 00		0.224	0.260	0.025	0.015	0.075

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107A2 LS0107A2
32 40 30.0 085 55 00.0 4
TALLAPOOSA RIVER
01 MAP TALLAPOOSA C
0/MARTIN LAKE 033491
HWY BRDG JUST BELO MARTIN DAM
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/04	10 00		0.170	3.700	0.098	0.016	0.035
73/04/07	15 35		0.176	1.400	0.063	0.009	0.025
73/05/16	10 00		0.168	1.300	0.040	0.007	0.015
73/06/09	09 45		0.132	0.300	0.020	0.005K	0.025
73/07/14	14 20		0.147	0.230	0.042	0.005K	0.010
73/08/05	09 45		0.180	0.210	0.022	0.006	0.015
73/09/16	13 25		0.040	1.100	0.069	0.005K	0.010
73/10/18	09 30		0.015	0.300	0.154	0.012	0.012
73/11/11	08 50		0.017	0.300	0.115	0.020	0.020
73/12/15	09 05		0.120	0.200	0.032	0.005K	0.010
74/01/05	09 00		0.168	0.100	0.040	0.005K	0.015
74/01/20	13 20		0.192	0.100	0.064	0.008	0.025
74/02/05	11 45		0.200	0.100K	0.040	0.010	0.020
74/02/20	13 00		0.224	0.100K	0.020	0.010	0.025

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107B1 LS0107B1
33 30 00.0 085 44 30.0 4
CHOCTAW CREEK
01 MAP TALLAPOOSA C
T/MARTIN LAKE 033491
BRDG ON SECONDARY HWY IN HAMLET
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/04	11 30		0.038	0.390	0.025	0.009	0.015
73/04/08	11 20		0.065	1.440	0.078	0.011	0.065
73/05/16	13 35		0.054	1.500	0.032	0.006	0.020
73/06/10	09 55		0.048	0.170	0.008	0.008	0.020
73/07/15	09 00		0.064	0.220	0.025	0.006	0.020
73/08/05	10 05		0.052	0.100K	0.015	0.007	0.015
73/09/16	11 07		0.063	1.600	0.147	0.006	0.016
73/10/18	13 50		0.017	0.100K	0.022	0.005K	0.025
73/11/11	11 10		0.010K	0.250	0.023	0.015	0.030
73/12/16	09 35		0.080	0.100K	0.032	0.008	0.030
74/01/05	13 20		0.068	0.100	0.034	0.008	0.025
74/01/20	09 35		0.064	0.100K	0.075	0.005K	0.015
74/02/05	10 35		0.072	0.100K	0.015	0.005	0.015
74/02/20	14 15		0.068	0.100K	0.030	0.005K	0.015

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107C1 LS0107C1
32 59 00.0 085 48 30.0 4
TIMBERGUT CREEK
01 MAP TALLAPOOSA C
T/MARTIN LAKE 033491
BRDG ON RD 1.5 MI SSE OF FOSHEETON
11EPALES 211204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/04	12 00		0.052	1.800	0.058	0.008	0.015
73/04/07	11 42		0.078	0.520	0.024	0.008	0.020
73/05/16	14 00		0.075	0.200	0.014	0.006	0.011
73/06/10	10 30		0.080	0.190	0.015	0.009	0.015
73/07/15	09 30		0.132	1.100	0.075	0.009	0.030
73/08/05	10 55		0.092	0.100K	0.015	0.005K	0.015
73/09/16	10 45		0.072	0.220	0.019	0.006	0.020
73/10/18	12 15		0.037	0.100K	0.037	0.010	0.020
73/11/11	11 20		0.018	0.250	0.066	0.015	0.065
73/12/16	09 00		0.136	0.200	0.020	0.016	0.045
74/01/05	13 35		0.140	0.100	0.016	0.008	0.015
74/01/20	09 20		0.096	0.100K	0.016	0.008	0.010
74/02/05	11 30		0.104	0.100K	0.010	0.005	0.010
74/02/20	14 30		0.112	0.100K	0.020	0.005K	0.005

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

010701 LS010701
32 59 00.0 085 51 30.0 4
MILLABEE CREEK
01 MAP TALLAPOOSA C
T/MARTIN LAKE 033491
BRDG ON ST RT 63 2 MI SW OF FOSHEETON
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/04	12 30		0.092	0.520	0.025	0.010	0.020
73/04/08	11 50		0.105	2.500	0.086	0.014	0.095
73/05/16	14 30		0.084	0.840	0.016	0.006	0.055
73/06/03	10 10		0.096	0.210	0.009	0.010	0.045
73/07/15	09 40		0.132	0.250	0.023	0.019	0.060
73/08/05	10 40		0.086	0.230	0.015	0.010	0.050
73/09/16	10 30		0.240	2.150	0.140	0.016	0.040
73/10/18	12 30		0.097	0.150	0.030	0.021	0.050
73/11/11	11 35		0.075	0.200	0.011	0.018	0.065
73/12/16	09 00		0.108	0.100K	0.012	0.016	0.040
74/01/06	09 45		0.208	0.600	0.080	0.008	0.030
74/01/20	09 30		0.158	0.200	0.016	0.012	0.020
74/02/05	10 40		0.140	0.200	0.020	0.010	0.030
74/02/20	15 00		0.116	0.100K	0.010	0.010	0.020

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107E1 LS0107E1
32 53 00.0 085 58 00.0 4
ELKAHATCHEE CREEK
01 MAP TALLAPOOSA C
T/MARTIN LAKE 033491
BRDG ON ST RT 63 2 MI S OF ALEXANDER
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/04	16	00	0.023	0.420	0.027	0.023	0.065
73/03/25	09	05	0.110	2.720	1.020	0.029	0.095
73/04/28	14	00	0.094	1.540	0.110	0.028	0.070
73/05/24	12	30	0.015	1.050	0.035	0.021	0.070
73/06/23	13	00	0.048	0.320	0.016	0.016	0.045
73/08/05	11	00	0.071	0.440	0.040	0.009	0.045
73/09/15	09	30	0.048	0.750	0.030	0.013	0.060
73/10/09	08	15	0.231	2.600	0.440	0.019	0.035
73/10/15	09	45	0.280	0.700	0.058	0.019	
73/12/18	09	15	0.184	0.300	0.090	0.010	0.050
74/01/05	10	45	0.152	0.300	0.044	0.022	0.075
74/01/09	10	20	0.160	0.900	0.096	0.020	0.075
74/01/14	10	15	0.136	0.100K	0.030	0.025	0.045
74/02/02	09	45	0.108	0.100	0.035	0.025	0.045

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107F1 LS0107F1
32 48 00.0 085 47 30.0 4
BUCK CREEK
01 MAP TALLAPOOSA C
T/MARTIN LAKE 033491
BRDG ON RD 1.5 MI SW OF DADEVILLE
11EPALES 21112U4
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/04	10 45		0.310	1.680	0.069	0.008	0.015
73/04/08	09 50		0.230	1.680	0.140	0.015	0.060
73/05/16	10 50		0.330	1.300	0.048	0.005K	0.015
73/06/09	11 15		0.273	0.200	0.027	0.006	0.020
73/07/14	14 50		0.370	0.320	0.080	0.005K	0.010
73/08/05	08 30		0.399	0.400	0.037	0.005K	0.015
73/09/16	14 15		0.410	0.920	0.043	0.005K	0.010
73/10/18	10 15		0.336	0.100K	0.040	0.005K	0.015
73/11/11	09 25		0.273	0.150	0.033	0.026	0.060
73/12/16	15 00		0.276	0.100	0.051	0.012	0.017
74/01/05	10 05		0.250	0.100	0.032	0.012	0.040
74/01/20	14 00		0.340	0.100K	0.032	0.008	0.010
74/02/05	14 00		0.312	0.300	0.030	0.010	0.010
74/02/20	13 45		0.300	0.130	0.030	0.007	0.015

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/07/22

0107G1 LS0107G1
32 48 00.0 085 47 30.0 4
SANDY CREEK (N AND S FORKS)
01 MAP TALLAPOOSA C
T/MARTIN RESVR 033491
BRDG ON ST RT 49 1.5 MI SW OF DADEVILLE
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/04	10 30		0.198	1.760	0.056	0.009	0.020
73/04/08	09 30		0.087	3.300	0.198	0.020	0.065
73/05/16	10 30		0.198	0.900	0.017	0.005K	0.015
73/06/09	10 40		0.250	0.320	0.042	0.011	0.055
73/07/14	14 30		0.220	2.700	0.320	0.008	0.030
73/08/04	14 30		0.200	0.240	0.014	0.005K	0.025
73/09/16	14 05		0.189	0.330	0.027	0.024	0.035
73/10/18	09 45		0.180	0.100K	0.026	0.022	0.050
73/11/11	09 15		0.100	0.275	0.029	0.016	0.055
73/12/15	11 15		0.208	0.100	0.028	0.005K	0.020
74/01/05	10 00		0.160	0.200	0.028	0.012	0.040
74/01/20	13 40		0.232	0.200	0.044	0.008	0.015
74/02/05	14 30		0.224	0.100	0.020	0.010	0.025
74/02/20	13 30		0.184	0.650	0.040	0.010	0.025

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107M1 LS0107M1
32 50 00.0 086 02 00.0 4
OAK&CHOY CREEK
01 MAP COOSA CO
T/MARTIN LAKE 033592
BRDG ON RD 5 MI NE OF EQUALITY
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/03/03	15 30		0.036	1.400	0.072	0.013	0.015
73/03/25	08 45		0.064	1.800	0.450	0.030	0.115
73/04/28	13 50		0.048	0.320	0.021	0.014	0.030
73/05/24	13 10		0.091	1.200	0.054	0.029	0.115
73/06/23	13 35		0.040	0.210	0.013	0.014	0.030
73/07/14	10 30		0.090	0.140	0.015	0.012	0.030
73/09/15	09 10		0.086	0.460	0.025	0.019	0.050
73/10/09	08 30		0.076	1.440	0.315	0.014	0.035
73/10/15	10 15		0.031	0.600	0.025	0.019	
73/12/18	09 40		0.014	0.100	0.016	0.016	0.040
74/01/05	11 10		0.192	0.200	0.044	0.016	0.040
74/01/09	10 00		0.064	0.600	0.016	0.016	0.035
74/01/19	09 50		0.66K	0.100K	0.015	0.015	0.025
74/02/02	08 40		0.050	0.100K	0.020	0.015	0.020

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107AA P0107AA P001000
33 09 00.0 085 30 00.0 4
MAULEY
01 KANDALL CO HWY
T/MARTIN LAKE 033491
HUTTON CREEK/TALLAPOOSA RIVER
IIEPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/07/30	08 30		0.080	6.500	0.087	1.600	4.530	0.040	0.040
73/08/27	08 00			8.200	0.019	4.120	5.000	0.040	0.040
73/09/25	08 30		0.050	6.300	0.600	3.200	3.600	0.039	0.040
73/10/29	08 00		0.025	6.300	0.048	5.000	5.500	0.040	0.036
73/11/26	08 00		0.420	4.400	0.300	3.990	4.600	0.040	0.040
73/12/26	09 00		0.720	5.700	0.120	4.600	5.200	0.040	0.040
74/01/28	08 30		0.120	6.000	0.094	4.200	6.700	0.040	0.040
74/02/25	08 15		0.640	5.800	0.570	4.300	5.000	0.040	0.040
74/04/05	08 30		0.440	12.000	1.900	4.200	6.200	0.040	0.040
74/04/30	08 30		0.280	11.000	1.300	5.000	6.700	0.040	0.200
74/05/26	08 30		0.040	14.000	0.910	5.200	7.500	0.041	0.041
74/06/26	08 30		0.132	11.000	0.060	4.800	6.400	0.041	0.049

52

STORET RETRIEVAL DATE 76/07/22

0107EA TF0107EA P001500
32 53 50.0 085 00 00.0 4
SPRING HILL (ALEXANDER CITY)
01 TALLAPOOSA CO ALA
T/MARTIN LAKE 033592
ELKAHATCHEE RIVER
11EMALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50050 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/04/30	07	30							
CP(T)-			0.220	6.400	1.790	0.840	2.080	0.268	0.298
73/04/30	14	30							
73/05/31	08	00							
CP(T)-			0.240	5.400	0.840	0.630	2.300	0.576	0.732
73/05/31	15	00							
73/06/29	07	00							
CP(T)-			0.185	8.125	3.100	1.470	3.300	0.435	0.460
73/06/29	15	00							
73/07/31	07	00							
CP(T)-			0.150	9.700	2.600	0.905	2.880	0.576	0.504
73/07/31	14	00							
73/08/31	07	00							
CP(T)-			0.990	8.800		2.060	3.550	0.413	0.532
73/08/31	14	00							
73/10/01	07	00							
CP(T)-			0.760	14.000	4.800	0.140	4.000	0.392	0.357
73/10/01	14	00							
73/10/31	07	30							
CP(T)-			0.990	15.500	5.400	3.800	5.900	0.410	0.396
73/10/31	14	30							
73/11/29	07	00							
CP(T)-			0.580	4.300	1.050	1.000	1.650	0.382	0.358
73/11/29	14	00							
73/12/31	07	00							
CP(T)-			0.420	10.000	1.200	0.810	1.550	0.415	0.372
73/12/31	14	00							
74/01/31	07	00							
CP(T)-			0.040	3.000	0.150	0.440	1.200	0.367	0.392
74/01/31	14	00							
74/02/28	07	00							
CP(T)-			0.280	3.200	1.100	0.670	1.600	0.472	0.641
74/02/28	14	00							
74/03/28	07	00							
CP(T)-			0.200	3.400	0.910	0.410	1.150	0.387	0.355
74/03/28	14	00							

STORET RETRIEVAL DATE 76/07/22

0107EB PU0107EB P001000*
32 53 40.0 085 59 30.0 4
SUGAR CREEK (ALEXANDER CITY)
01 TALLAPOOSA CO MW
T/MARTIN LAKE 033491
SUGAR CREEK/ELKAHATCHEE RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/04/30	07	30							
CP(T)-			0.090	14.700	3.200	5.580	6.700	4.700	4.630
73/04/30	14	30							
73/05/31	08	00							
CP(T)-			0.100	13.A00	2.300	6.500	7.700	4.880	4.290
73/05/31	15	00							
73/06/29	07	00							
CP(T)-			0.150	12.600	3.300	6.600	8.100	5.170	4.760
73/06/29	15	00							
73/07/31	07	00							
CP(T)-			0.200	14.000	1.200	5.400	7.000	5.450	4.750
73/07/31	14	00							
73/08/31	07	00							
CP(T)-			0.092	12.600		4.800	6.700	5.510	4.690
73/08/31	14	00							
73/10/01	07	00							
CP(T)-			0.130	14.700	2.300	0.150	6.000	5.040	5.100
73/10/01	14	00							
73/10/31	07	30							
CP(T)-			0.126	13.500	0.165	5.380	7.900	5.510	5.240
73/10/31	14	30							
73/11/29	07	00							
CP(T)-			0.100	11.500	1.300	5.400	7.000	5.630	4.760
73/11/29	14	00							
73/12/31	07	00							
CP(T)-			0.110	23.000	1.050	4.100	5.800	4.210	4.490
73/12/31	14	00							
74/01/31			0.320	11.000	0.470	5.400	7.100	5.250	5.310
74/02/27	07	00							
CP(T)-			0.120	9.000	0.050K	4.600	6.400	4.790	4.250
74/02/27	14	00							
74/03/27	07	00							
CP(T)-			0.040	11.000	1.000	5.000	6.700	4.760	3.520
74/03/27	14	00							

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/07/22

0137[illegible] AS0107GA P001744
32 37 50.0 085 56 00.0 4
DOMAS CREEK (ALEXANDER CITY)
01 TALLAPOOSA CO MS
12MARTIN LAKE 033441
DOMAS CREEK/SANDY CREEK
11EMALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50050 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/04/30	07 30								
CP(I)-			0.200	1.400	0.780	2.750	2.750	0.620	0.731
73/04/30	14 30								
73/05/31	08 00								
CP(I)-			0.240	4.600	1.580	0.602	0.900	0.742	0.752
73/05/31	15 00								
73/06/24	07 00								
CP(I)-			0.115	5.200	0.720	2.700	3.200	0.632	0.674
73/06/24	15 00								
73/07/31	07 00								
CP(I)-			0.720	2.300	0.500	3.900	4.400	0.607	0.621
73/07/31	14 00								
73/08/31	07 00								
CP(I)-				1.200		6.800	7.500	0.516	0.535
73/08/31	14 00								
73/10/01	07 00								
CP(I)-			5.200	0.950	0.055	3.300	3.450	0.716	0.513
73/10/01	14 30								
73/10/31	07 30								
CP(I)-			0.230	1.600	0.230	5.700	6.000	0.491	0.492
73/10/31	14 30								
73/11/24	07 00								
CP(I)-			10.060	0.660	0.071	5.400	6.000	0.234	0.446
73/11/24	14 00								
73/12/04			0.400	10.000	2.300	7.700	8.400		
73/12/31	07 00								
CP(I)-			3.500	0.840	0.058	0.440	1.600	3.641	0.470
73/12/31	14 00								
74/01/31	07 00								
CP(I)-			0.500	0.600	0.040*	1.400	1.550	0.716	0.788
74/01/31	14 00								
74/02/27	07 00								
CP(I)-			0.500	1.000*	0.070	1.700	2.000	0.566	0.824
74/02/27	14 00								
74/03/27	07 00								
CP(I)-			11.400	1.400	0.091	3.100	3.600	0.646	0.612
74/03/27	14 00								

* VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107GB AS0107GB P002300
32 57 50.0 087 57 30.0 4
CHRISTIAN CREEK (ALEXANDER CITY)
01 TALLAPOOSA CO AW
T/MARTIN LAKE 033992
SANDY CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/04/30	06	30							
CP(T)-			3.700	1.800	0.400	0.680	2.700	0.730	0.810
73/04/30	13	30							
73/05/31	08	00							
CP(T)-			1.400	3.600	0.920	0.600	1.350	0.888	0.970
73/05/31	15	00							
73/06/29	07	00							
CP(T)-			1.200	1.900	1.050	1.200	1.700	0.835	0.838
73/06/29	15	00							
73/07/31	07	00							
CP(T)-			7.400	0.800	0.040	2.500	3.100	0.630	0.553
73/07/31	14	00							
73/08/31	07	00							
CP(T)-				1.225		3.240	3.450	0.557	0.605
73/08/31	14	00							
73/10/01	07	00							
CP(T)-			0.650	1.100	0.290	2.100	2.500	0.560	0.505
73/10/01	14	00							
73/10/31	07	30							
CP(T)-			1.000	4.250	0.570	2.900	3.500	0.492	0.575
73/10/31	14	30							
73/11/29	07	00							
CP(T)-			1.980	1.150	0.290	1.320	1.540	0.646	0.626
73/11/29	14	00							
73/12/31	07	00							
CP(T)-			4.800	0.910	0.046	0.675	1.000	1.030	0.726
73/12/31	14	00							
74/01/30	07	00							
CP(T)-			4.300	0.600	0.087	0.740	0.920	1.000	1.730
74/01/30	14	00							
74/02/27	07	00							
CP(T)-			5.200	1.000K	0.050K	0.720	1.150	0.520	0.587
74/02/27	14	00							
74/03/27	07	00							
CP(T)-			3.600	2.000	0.145	1.450	1.750	0.712	0.639
74/03/27	14	00							

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

01076C P0010760 P000900
32 44 00.0 085 39 00.0 4
CAMP HILL
01 TALLAPOOSA CO HW
T/MARTIN LAKE 033491
SANDY CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/09/28	14 30		0.250	12.000	2.400	12.000	15.000		
73/11/05	13 00		0.110	15.000	1.200	10.200	14.000		
74/01/02	09 45		0.480	10.500	1.320	4.900	6.600		
74/01/28	09 00		0.040	14.000	2.620	4.900	6.200		
74/02/28	08 00		0.320	6.800	1.000	3.500	4.500		
74/03/28	10 00		0.200	12.500	2.300	5.400	7.100		
74/07/01	15 00		0.040	8.800	0.050K	7.000	8.000		0.080
74/07/29	16 15		0.080	12.000	0.710	7.900	9.900		
74/08/29	13 40		7.700	8.800	0.820	6.900	6.900	0.085	0.085
74/09/30	12 30		4.000	10.000	1.150	5.100	5.750	0.087	0.087

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/07/22

0107GD P0010760 P001508
32 47 45.0 085 46 15.0 4
DADEVILLE
01 TALLAPOOSA CO HW
T/MARTIN LAKE 033491
SANDY CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/10/23	08	00	0.230	12.500	0.880	12.000	14.500	0.004	0.004
74/03/06	08	00	0.200	9.300	3.000	10.500	10.500	0.200	0.200
74/04/10	08	00	0.080	6.400	1.250	8.700	10.500	0.200	0.200

STORET RETRIEVAL DATE 76/07/22

0107JA AS0107JA P0030000*
32 51 30.0 085 50 30.0 4
COLEY CREEK (ALEXANDER CITY)
01 TALLAPOOSA CO MW
T/MARTIN LAKE 033491
COLEY CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/04/30	07	30							
CP(T)-			3.800	2.700	0.150	2.400	2.700	1.040	0.908
73/04/30	14	30							
73/05/31	08	00							
CP(T)-			0.440	7.600	1.700	3.000	3.600	1.210	1.200
73/05/31	15	00							
73/06/29	07	00							
CP(T)-			0.138	14.000	2.800	5.300	7.350	1.030	0.958
73/06/29	15	00							
73/07/31	07	00							
CP(T)-			0.560	10.500	3.300	5.500	6.400	0.688	0.676
73/07/31	14	00							
73/08/31	07	00							
CP(T)-			0.115	10.000		6.700	9.500	0.581	0.691
73/08/31	14	00							
73/10/01	07	00							
CP(T)-			1.260	10.200	4.300	4.700	4.900	0.851	0.526
73/10/01	14	00							
73/10/31	07	30							
CP(T)-			2.520	15.500	2.300	8.900	11.000	0.526	0.389
73/10/31	14	30							
73/11/29	07	00							
CP(T)-			0.460	11.000	2.600	3.600	4.500	0.782	0.656
73/11/29	14	00							
73/12/31	07	00							
CP(T)-			2.310	7.900	1.490	2.100	3.150	0.999	0.709
73/12/31	14	00							
74/01/31	07	00							
CP(T)-			0.040	5.800	0.071	2.520	3.300	1.250	0.985
74/01/31	14	00							
74/02/28	07	00							
CP(T)-			1.000	4.000	0.110	3.700	4.100	0.838	0.835
74/02/28	14	00							
74/03/28	07	00							
CP(T)-			0.040	9.400	1.250	3.800	5.300	0.944	0.792
74/03/28	14	00							

APPENDIX E

PARAMETRIC RANKINGS OF LAKES SAMPLED BY NES IN 1974 STATE OF ALABAMA

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P
0101	HANDMEAD LAKE	0.024	0.770	452.667	4.017	14.900	0.007
0103	GANTT RESERVOIR	0.024	0.300	465.778	2.144	14.000	0.008
0104	GUNTERSVILLE RESERVOIR	0.044	0.480	461.111	8.567	12.200	0.014
0105	HOLT LOCK AND DAM	0.018	0.835	449.417	2.183	13.600	0.009
0106	LAY LAKE	0.076	0.390	470.778	7.056	13.000	0.032
0107	MARTIN LAKE	0.017	0.170	435.250	6.407	15.000	0.004
0108	MITCHELL LAKE	0.053	0.290	466.000	6.211	12.400	0.022
0109	PICKWICK LAKE	0.056	0.535	455.000	2.450	11.900	0.035
0112	WEISS RESERVOIR	0.092	0.260	478.385	11.261	14.900	0.034
0114	WILSON LAKE	0.053	0.460	447.714	7.400	10.200	0.022
0115	LAKE PURDY	0.049	0.170	437.889	12.711	15.000	0.014

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN 30	MEDIAN DISS ORTHO P	INDEX NO
0101	HANKHEAD LAKE	75 (71)	10 (11)	60 (61)	71 (71)	25 (21)	80 (81)	320
0103	GANTT RESERVOIR	75 (71)	60 (61)	30 (31)	100 (101)	40 (41)	70 (71)	375
0104	GUNTERSVILLE RESERVOIR	60 (61)	30 (31)	40 (41)	20 (21)	80 (81)	55 (51)	285
0105	HOLT LOCK AND DAM	90 (91)	0 (01)	70 (71)	90 (91)	50 (51)	90 (91)	340
0106	LAY LAKE	10 (11)	50 (51)	10 (11)	40 (41)	60 (61)	20 (21)	140
0107	MARTIN LAKE	100 (101)	95 (91)	100 (101)	50 (51)	5 (01)	100 (101)	450
0108	MITCHELL LAKE	40 (41)	70 (71)	20 (21)	60 (61)	70 (71)	35 (31)	295
0109	PICKWICK LAKE	20 (21)	20 (21)	50 (51)	80 (81)	90 (91)	0 (01)	260
0112	WEISS RESERVOIR	0 (01)	80 (81)	0 (01)	10 (11)	25 (21)	10 (11)	125
0114	WILSON LAKE	30 (31)	40 (41)	80 (81)	30 (31)	100 (101)	35 (31)	315
0115	LAKE PURDY	50 (51)	95 (91)	90 (91)	0 (01)	5 (01)	55 (51)	295

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
1	0107	MARTIN LAKE	450
2	0105	HOLT LOCK AND DAM	340
3	0103	GANTT RESERVOIR	375
4	0101	BANKHEAD LAKE	320
5	0114	WILSON LAKE	315
6	0115	LAKE PURDY	295
7	0108	MITCHELL LAKE	295
8	0104	GUNTERSVILLE RESERVOIR	285
9	0109	PICKWICK LAKE	260
10	0106	LAY LAKE	190
11	0112	WEISS RESERVOIR	125